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PLANE AIR BRIDGE *MEMS* SWITCH

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ABSTRACT

PROBLEM TO BE SOLVED: To provide an *RF* switch including a multiplicity of strokes and capable of being manufactured by utilizing only a single metallization layer, and to provide a manufacturing method of the *RF* switch.

SOLUTION: This switch includes an air bridge suspension beam 24 disposed adjoining one or more metallic traces. One or more control pads 26, 28 are disposed adjoining the suspension beam 24 and electrostatically actuate the switch. The suspension beam 24, the metallic traces, and the contact pads are all manufactured of the single metallization layer. The switch is structured so that the beam is deflected in a plane substantially parallel to a surface of a substrate. By dispensing with a multiplicity of metallization layers, the complexity of switch manufacture is relaxed. This switch structure enables a multi-pole multi-throw switch to be manufactured by using a single metallization level.

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